UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/010,330	11/08/2001	Kenji Takeda	P/1139-108	5814

7590 05/17/2007	EXAMINER
Dickstein, Shapiro, Morin & Oshinsky LLP 1177 Avenue of the Americas 41 st floor New York, NY 10036-2714	ROBERTS, BRIAN S

ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	**Applicant(s)**
Office Action Summary	10/010,330	TAKEDA, KENJI
	Examiner	**Art Unit**	
	Brian Roberts	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *13 February 2007*.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-15* is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-15* is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some *   c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

- Applicant's amendment filed 02/13/2007 is acknowledged.

- Claims 1-15 remain pending.

Claim Objections

Claim 2 is objected to because of the following informalities:

- In claim 2 line 9, "increasing the counter value" should read --increasing the

  current counter value—

- In claim 2 line 11, "said counter value" should read --said current counter

  value--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

1.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

   The specification shall conclude with one or more claims particularly pointing out and distinctly
   claiming the subject matter which the applicant regards as his invention.

Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being

indefinite for failing to particularly point out and distinctly claim the subject matter which

applicant regards as the invention.

-      In reference to claims 1, 3, 6, 8

Where applicant acts as his or her own lexicographer to specifically define a term

of a claim contrary to its ordinary meaning, the written description must clearly redefine

the claim term and set forth the uncommon definition so as to put one reasonably skilled

in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term counter/data transmitter "for counting the number of round trips of data packets transmitted" is indefinite because the specification does not clearly redefine the term. According to the disclosure, "When the counter value added to a received ACK message is equal to the current counter value, ACK processing means increases the counter value by one" (abstract). The counter does not count the number of round trips of data packets transmitted because while the data packets are transmitted from a data transmitter to a data receiver, they are not transmitted back to the data transmitter from the data receiver. The data packets never make a round trip. Instead, data packets are transmitted from a data transmitter to a data receiver and then ACK packets are transmitted from the data receiver to the data transmitter. Appropriate correction is required to clearly distinguish that a round trip consists of a data transmitter transmitting a data packet to a data receiver and the data receiver transmitting an ACK message in response to the received data packet to the data transmitter.

- In reference to claims 5 and 10

The term "closed window" in the phrase "release, from the transmission window, a closed window" is undefined and renders the claim indefinite. A transmission window may be closed but it is unclear how a transmission window includes a "closed window" or in general, how a transmission window includes a window. The term "closed window" is not defined by the claim, the specification does not provide a standard for

ascertaining the requisite degree, and one of ordinary skill in the art would not be

reasonably apprised of the scope of the invention.

- In reference to claims 2, 4, 7, 9, and 11-15

Claims 2, 4, 7, 9, and 11-15 are rejected because they are dependent on claims

1, 3, 5-6, 8 and 10.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3.   Claims 1-2, 6-7, and 11-12, as best understood, are rejected under 35

U.S.C. 102(b) as being anticipated by Tahara (US 5425025).

- In reference to claim 1, 6, 11

In Figures 2, 3, and 11, Tahara teaches a communication system and method

including a data transmitter, data receiver, and data network wherein the data

transmitter transmits data packets to the receiver, and the data receiver transmits ACK

packets to the data transmitter and the data transmitter retransmits lost data packets

based on the content of the ACK packet wherein the data transmitter includes:

- A counter for counting the sequence number (*number of round trips*) of data

    packets (column 3 lines 44-49)

- Means for storing, for each transmitted data packet, a relationship between the data packet and the sequence number (*counter value*) of a counter at the time of the transmission of the data packet (column 3 lines 50 – column 4 line 19)

- Means for judging when the stored sequence number (*counter value*) is a variable number which includes two or smaller than a current sequence number (*counter value*), that the data packet corresponding to the stored sequence number (*counter value*) has been lost (column 6 lines 47-60)

- In reference to claim 2, 7, 12

In Figure 1, Tahara further teaches a communication system that includes:

- The data transmitter including means for incorporating the sequence number (*current counter value*) into the data packet transmitted (column 3 lines 44-49)

- The data receiver including means for incorporating the sequence number (*counter value*) that was incorporated into the data packet transmitted, into an ACK packet for the received data packet (column 3 lines 44-49)

- The data transmitter including means for increasing the sequence number (*counter value*) by one in the case where the value contained in the received ACK packet is equal to the sequence number (counter value). (column 3 lines 50 – column 4 line 19)

4.   Claims 5, 10, and 15, as best understood, are rejected under 35 U.S.C. 102(b)

as being anticipated by Stallings "Data and Computer Communications".

-      In reference to claim 5, 10, 15

Stallings teaches a data transmitter, a data receiver, and a network for

connecting the data transmitter to the data receiver, wherein said data transmitter

transmits data packets to the data receiver, said data receiver transmits an ACK packet

for informing the data transmitter of the confirmation of the delivery of the received data

packet, and said data transmitter detects the loss of the transmitted data packet based

on the content of the ACK packet and retransmits the data packet, which has been

detected to be lost, whereby error control of data packets is carried out and, wherein,

during error control in its period between the detection of the loss of a data packet and

the confirmation of the delivery of the data packet by the data transmitter, transmission

flow control is carried out by the use of a fixed sliding-window scheme that includes the

use of acknowledgements to advance the transmission window where the transmission

window is advanced when an ACK packet is received. (pg. 550)

Claim Rejections - 35 USC § 103

5.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

6.   Claims 3-4, 8-9, and 13-14, as best understood, rejected under 35 U.S.C. 103(a)

as being unpatentable over Tahara (US 5425025) in view of Ayanoglu et al. (US

5570367).

-       In reference to claims 3-4, 8-9, 13-14

In Figures 2, 3, and 11, Tahara teaches a communication system and method

including a data transmitter, data receiver, and data network wherein the data

transmitter transmits data packets to the receiver, and the data receiver transmits ACK

packets to the data transmitter and the data transmitter retransmits lost data packets

based on the content of the ACK packet wherein the data transmitter includes:

- A counter for counting the sequence number (*number of round trips*) of data
  packets (column 3 lines 44-49)

- Means for storing, for each transmitted data packet, a relationship between
  the data packet and the sequence number (*counter value*) of a counter at the
  time of the transmission of the data packet (column 3 lines 50 – column 4 line
  19)

- Means for judging when the stored sequence number (*counter value*) is a
  variable number which includes two or smaller than a current sequence
  number (*counter value*), that the data packet corresponding to the stored
  sequence number (*counter value*) has been lost (column 6 lines 47-60)

Tahara does not teach a first table for storing the relationship between the data

packet and the time at the point of the transmission of the data packet in the first table

or when the value of the time stored in the first table is smaller than the value of the time

corresponding to a counter value which is two smaller than the current counter value

stored, judging that the data packet corresponding to the time stored in the first table

has been lost.

Ayanoglu et al. teaches a data communication system and method that includes

generating a transmission time inherently with a clock and recording the packet

identification number and transmission time in a status array. The transmission time can

be utilized to judge the sequence of the packets where the older transmission time, the

older the packet. (column 3 lines 37-43)

It would have been obvious to a person of ordinary skill in the art at the time of

the invention to modify the system and method of Tahara to include to retransmit a

packet when the transmission time of a packet stored in the status array is two smaller

than the clock corresponding to the counter value as taught by Ayanoglu et al. because

the recorded the transmission time allows packets older than a particular transmission

time to be judged to be lost and retransmitted.

Response to Arguments

7.   Applicant's arguments filed on 03/01/2007 have been fully considered but they

are not persuasive.

- In the Remarks on pg. 11 of the Amendment, the Applicant contends that

  objected to term "round trip counter" is clearly explained in the specification

  and meets all the requirements of Section 112, second paragraph.

- The Examiner respectfully disagrees. The term "round trip counter" is not recited in the claims. The claims recite "a counter for counting the number of round trips of data packets transmitted". However, the counter does not count the number of round trips of data packets transmitted because while the data packets are transmitted from a data transmitter to a data receiver, they are not transmitted back to the data transmitter from the data receiver. The data packets never make a round trip.

- In the Remarks of pg. 11 of the Amendment, the Applicant contends that closed window is known to those skilled in the art. For example, it is known to those skilled in the art that a window could be "closed" due to a lost TCP acknowledgement.

- The term "closed window" is not known to those skilled in the art in the context of the claim where a transmission window releases a closed window. A transmission window may be a "closed transmission window" but it is unclear how a transmission window includes a closed window.

- In the Remarks on pg. 12 of the Amendment, the Applicant contends that Tahara does not teach the transmitter storing a counter value and judging that a packet has been lost when the stored counter value is two or more smaller than a current value of the counter.

- The Examiner respectfully disagrees. As best understood, Tahara meets the limitations of independent claims 1, 3, 6, and 8. The transmitter judges a packet to be lost when the stored sequence number (*counter value*) of the packet is a variable number which includes two or smaller than a current sequence number (*counter value*).

- In the Remarks on pg. 12 of the Amendment, the Applicant contends that Stallings discloses a sliding-window technique for flow control and does not meet independent claims 5, 10, and 15 that relate to a technique for releasing a window that has been closed due to congestion control.

- The Examiner respectfully disagrees. As best understood, Stallings meets the limitations of independent claims 5, 10, and 15. A first particular data unit in a transmission window of Stallings remains "closed" until an acknowledgment is received for the first particular data unit. Once an acknowledgement is received the first particular data unit is "released" and a second particular data unit corresponding to the total size of the "released" first data unit is rendered transmittable.

Conclusion

8.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
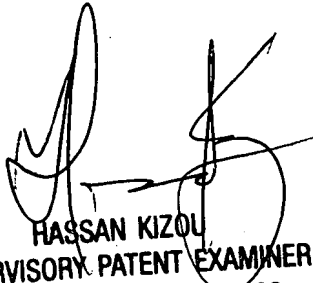
9.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Roberts whose telephone number is (571) 272-3095. The examiner can normally be reached on M-F 10:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the
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BSR
05/13/2007

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